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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER OLANIRAN, FATIMAT O				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/799,526

Applicant(s)

LINDAHL ET AL.

Examiner

FATIMAT O. OLANIRAN

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,6 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-5,7-18,22-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Response to Arguments

1. Applicant's arguments with respect to claims 1-6, 9, 11, 18-21, 23 have been considered but are moot in view of the new ground(s) of rejection based on USC 101 and 112 and applicant's amendments.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims, 1, 4-5, 7-18, 22 are directed to non-statutory subject matter.

4. Applicant claims, in these claims "A computer-implemented method..." According to applicant's disclosure the computer implemented method is a computer program. A "computer program" is neither a process ("action"), nor machine, nor manufacture, nor composition of matter (i.e., tangible "thing") and therefore non-statutory.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claims as a whole is non-statutory, under the present USPTO Interim Guidelines, 1300 Official Gazette Patent and Trademark Office 142 (Nov. 22, 2005).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 13, 18, 23 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant claims in claim 1 " ...a computer-implemented method for approximating n-band graphic equalizer settings for a media player using not more than m filters, where m is less than n..." However it is not clear to examiner the operation of the n-bands and the m filters. In order to obtain n-bands it is not clear if applicant uses n filters. The "n-bands" appears to be an arbitrary setting of a scale on an equalizer display. It is not clear whether the n-bands correspond to n filters.

Furthermore the m filters appear to be m-filter response waveforms that are matched to the original waveform as displayed with the n-bands and are not actually filtering the waveform.

Due to the ambiguities in the claim language examiner maintains the original rejection.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 4-5, 9, 11, 18 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshino (2004/0071299).

Claim 1, Yoshino discloses, a computer-implemented method for approximating n-band graphic equalizer settings for a media player (paragraph 4 line 1-4) using not more than m bands, where m is less than n, (paragraph 14, line 7-10, m band: fixed level band, n band: variable level band) said method comprising:

- (a) classifying at least a plurality of the equalizer setting values with respect to characteristics of at least a portion of a frequency response shape (paragraph 14, line 9-13) of at least one of a plurality of predetermined filter types (paragraph 14, line 7-10, filter types: fixed-level and variable); and
- (b) determining parameters for one or more filters of the at least one of the plurality of predetermined filter types used in classifying the equalizer settings (paragraph 47, line 6-10).
- (c) assigning a priority to each of the one or more filters in the classification (paragraph 47 line 9-10); and

(d) limiting the number of the one or more filters in the classification to not more than m based on the priority assigned to each of the plurality of the predetermined filter types in the classification (paragraph 47 line 6-11).

Claim 4, Yoshino discloses a computer-implemented method wherein $n = 10$ (paragraph 61, line 2-8, $n=10$).

Claim 5, Yoshino discloses a computer-implemented method as recited in claim 3, wherein said limiting (c) operates to limit the plurality of the predetermined filter types in the classification to a maximum of three (paragraph 61, line 2-8).

Claim 9, Yoshino discloses a computer-implemented wherein the classification approximates the equalizer setting values through use of a minimum number of the predetermined filter types (paragraph 62, line 1-4).

Claim 11, Yoshino discloses wherein the filters are digital filters (paragraph 55, line 1-4).

Claim 18, Yoshino discloses a computer readable medium including at least computer program code (paragraph 16, line 1-4) for approximating n -band graphic equalizer settings for a computing device using less than n bands, said computer readable medium comprising:

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computer program code for classifying at least a plurality of the equalizer setting values with respect to characteristics of at least a portion of a frequency response shape of at least one of a plurality of predetermined filter types; and computer program code for determining parameters for one or more filters of the at least one of the plurality of predetermined filter types used in classifying the equalizer settings (paragraph 16, line 6-16) computer program code for assigning a priority to each of the one or more filters in the classification and computer program code for limiting the number of the one or more filters in the classification to not more than m based on the priority assigned to each of the plurality of the predetermined filter types in the classification (paragraph 47 line 6-11).

Claim 23, Yoshino discloses a system for approximating an n-band graphic equalizer for use on a device having limited computational resources or computational time, said system comprising: means for classifying at least a plurality of equalizer setting values of the n-band graphic equalizer with respect to characteristics of at least a portion of a frequency response shape of at least one of a plurality of predetermined filter types; and means for determining parameters for one or more filters of the at least one of the plurality of predetermined filter types used in classifying the equalizer settings (paragraph 16, line 1-16).

2. Claims 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Ecklund et al (5524290).

Claim 23, Ecklund discloses a system for approximating an n-band graphic equalizer using not more than m filters where m is less than n (col. 3 line 27-31), for use on a device having limited computational resources or computational time, said system comprising: means for classifying at least a plurality of equalizer setting values of the n-band graphic equalizer with respect to characteristics of at least a portion of a frequency response shape of at least one of a plurality of predetermined filter types; and means for determining parameters for one or more filters of the at least one of the plurality of predetermined filter types used in classifying the equalizer settings (col. 3, line 27-35) means for assigning a priority to each of the one or more filters in the classification and means for limiting the number of the one or more filters in the classification to not more than m based on the priority assigned to each of the plurality of the predetermined filter types in the classification (col. 3 line 57-61).

Claim 24, Ecklund discloses wherein said system is an embedded system (col.2, line 57-60)

Claim 25, Ecklund discloses wherein the system is a portable computing device (col. 2, line 52-56).

Claim 26, Ecklund discloses wherein the system is a hand-held media player (col. 2 line 14-17).

3. Claims 7-8, 12-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino (2004/0071299) in view of Wiser et al (7016746).

Claim 7 analyzed with respect to claim 1, Yoshino does not disclose a computer-implemented wherein the predetermined filter types in the classification are chosen from the group consisting of: a low-shelf, a high-shelf and a parametric.

Wiser discloses disclose a computer-implemented wherein the predetermined filter types in the classification are chosen from the group consisting of: a low-shelf, a high-shelf and a parametric (col. 8 line 50-55). Therefore it would be obvious to one of ordinarily skilled in the art at the time the invention was made to modify the graphic equalizer of Yoshino with the shelving filters of Wiser in order to provide signal boosts or cuts for a desired frequency range.

Claim 8 analyzed with respect to claim 7 and claim 1, Yoshino in view of Wiser disclose computer-implemented method, wherein the predetermined filter types in the classification include not more than one low-shelf and not more than one high-shelf (Wiser: col. 8 line 50-55).

Claim 12, Yoshino does not disclose wherein the media player is a hand-held media player. Wiser discloses wherein the media player is a hand-held media player (col. 1

line 48-49). Therefore it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the media system of Yoshino with the CD player of Wiser in order to have equalized digital music.

Claim 13, Yoshino discloses a computer-implemented method for approximating n-band graphic equalizer settings for a media player using less than n filters, said method comprising (paragraph 4 line 1-4) :

- (c) examining the equalizer setting values other than the first set for approximate correlation to at least a portion of a frequency response of a parametric type filter (paragraph 61, line 2-8);
- (d) selecting the parametric type filter if a second set of the equalizer settings approximately correlate (paragraph 61, line 2-8); and
- (e) determining parameters for the shelf type filter and the parametric type filter, (paragraph 64, line 1-5).

Yoshino does not disclose (a) examining the equalizer setting values for approximate correlation to at least a portion of a frequency response of a shelf type filter;

- (b) selecting the shelf type filter if a first set of the equalizer setting values approximately correlate; wherein at least the shelf type filter and the parametric type filter are used to approximate the n-band graphic equalizer settings for the media player.

Wiser discloses (a) examining the equalizer setting values for approximate correlation to at least a portion of a frequency response of a shelf type filter;

- (b) selecting the shelf type filter if a first set of the equalizer setting values approximately

correlate (col. 8 line 41-47); wherein at least the shelf type filter and the parametric type filter are used to approximate the n-band graphic equalizer settings for the media player (col. 8 line 50-54). Therefore it would be obvious to one of ordinary skilled in the art at the time the invention was made to modify the graphic equalizer of Yoshino with the shelving filters of Wiser in order to provide signal boosts or cuts for a desired frequency range.

Claim 14 analyzed with respect to claim 13, Yoshino further discloses, wherein said method approximates the n-band graphic equalizer settings for the media player using not more than m of the filters (paragraph 61, line 2-8, $m=1$).

Claim 15 analyzed with respect to claim 13, Yoshino further discloses wherein the filters are digital filters (paragraph 55, line 1-4).

Claim 16 analyzed with respect to claim 13, Yoshino discloses wherein the equalizer, settings within the first set are adjacent one another, and wherein the equalizer settings within the second set are adjacent one another (paragraph 61, line 2-8, variable filters are adjacent tone another).

Claim 17 analyzed with respect to claim 13, Wiser further discloses wherein the media player is a hand-held media player (col. 1 line 48-49).

Claim 22 analyzed with respect to claim 18, Yoshino does not disclose wherein the predetermined filter types in the classification are chosen from the group consisting of: a low-shelf, a high-shelf and a parametric.

Wiser discloses wherein the predetermined filter types in the classification are chosen from the group consisting of: a low-shelf, a high-shelf and a parametric (col. 8 line 50-55). Therefore it would be obvious to one of ordinary skilled in the art at the time the invention was made to modify the graphic equalizer of Yoshino with the shelving filters of Wiser in order to provide signal boosts or cuts for a desired frequency range.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino (2004/0071299) in view of Montag et al. (2004/0032959).

Claim 10, Yoshino does not disclose wherein the predetermined filter types are second order recursive filters.

Montag discloses wherein the predetermined filter types are second order recursive filters (paragraph 8, line 1-3).

Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the graphic equalizer of Yoshino with the recursive filters of Montag to ensure spectrally balanced sound as taught by Montag (paragraph 7, line 9).

5. Claim 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiser et al (7016746) in view of Yoshino (2004/0071299).

Claim 27, Wiser discloses a media device comprising: a data store for storing media data received from a host computer (col. 1 line 44-49),

Wiser does not the media data including media content and equalizer setting information for at least one media item and a processor operatively connected to said data store, said processor operates to acquire n-band equalizer setting values based on the equalizer setting information, to approximate the n-band equalizer setting values with a reduced filter order approximation by (a) classifying at least a plurality of the equalizer setting values with respect to characteristics of at least a portion of a frequency response shape of a plurality of predetermined filter types (b) determining parameters for one or more filters of the plurality of predetermined filter types used in classifying the equalizer settings (c) assigning a priority to each of the one or more filters in the classification and (d) limiting the number of the one or more filters in the classification to not more than m where m is less than n based on the priority assigned to each of the plurality of the predetermined filter types in the classification and to present the media content at said media player in accordance with the reduced filter order approximation.

Yoshino discloses the media data including media content and equalizer setting information for at least one media item (paragraph 16, line 1-5); and a processor operatively connected to said data store, said processor operates to acquire n-band equalizer setting values based on the equalizer setting information, to approximate the

n-band equalizer setting values with a reduced filter order approximation (paragraph 16, line 6-16) by (a) classifying at least a plurality of the equalizer setting values with respect to characteristics of at least a portion of a frequency response shape of a plurality of predetermined filter types (paragraph 14, line 9-13), (b) determining parameters for one or more filters of the plurality of predetermined filter types used in classifying the equalizer settings (paragraph 47, line 6-10), (c) assigning a priority to each of the one or more filters in the classification and (d) limiting the number of the one or more filters in the classification to not more than m where m is less than n based on the priority assigned to each of the plurality of the predetermined filter types in the classification (paragraph 47 line 6-11), and to present the media content at said media player in accordance with the reduced filter order approximation (paragraph 16, line 6-16).

Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the computer system of Wiser with the graphic equalizer of Yoshino in order to be able to store and send quality digital audio.

Claim 28 analyzed with respect to claim 27, Wiser further discloses wherein said data store comprises a hard drive that stores the media data (col. 1 line 45-47).

Claim 29 analyzed with respect to claim 27, Wiser further discloses wherein said media device is a hand-held media player (col. 1 line 48-49).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FATIMAT O. OLANIRAN whose telephone number is (571)270-3437. The examiner can normally be reached on M-F 10:00-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FO

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2615